

An active heat sink is described for use in the transfer of heat from a heat generating device such as a semiconductor chip and the like with a heat sink having an embedded fan surrounded by a plurality of heat conducting flow augmenting rings separated by apertures through which a radially inward flow arises and with the rings being sufficiently axially separated to enable fan propeller tip vortices to penetrate the axial spacings so as to cause a substantial cooling of annular ring regions so as to raise the overall heat transfer coefficient of the active heat sink in a significant manner. Several embodiments are described.